Extra Content for Foundation GCSE

94. Equations vs Identities: Understanding the Difference

Practice Questions

1. Is $2x + 3 = 7$ an equation or an identity?
2. Is $(x + 1)(x - 1) = x^2 - 1$ an equation or an identity?
3. Determine whether $3(x + 2) = 3x + 6$ is an equation or an identity.
4. Is $x^2 - 4 = 0$ an equation or an identity?
5. Identify if $a + b = b + a$ is an equation or an identity.
6. Determine whether $5y - 10 = 2y + 8$ is an equation or an identity.
7. Is $4(2x + 3) = 8x + 12$ an equation or an identity?
8. Identify if $\sin^2\theta + \cos^2\theta = 1$ is an equation or an identity.
9. Is $x^2 - 9 = (x + 3)(x - 3)$ an equation or an identity?
10. Determine if $y = mx + c$ is an equation or an identity.

Scenario Questions

1. A shopkeeper calculates total cost using $C = 5x + 2$. Is this an equation or an identity?
2. A student simplifies $(a + b)^2 = a^2 + 2ab + b^2$. Is this an equation or an identity?
3. A scientist uses $F = ma$ for force. Is this an equation or an identity?
4. A manufacturer finds that $2(x + 3) = 2x + 6$ always holds. Is this an equation or an identity?
5. A builder uses Area = length × width to calculate flooring. Is this an equation or an identity?
6. A programmer writes $x + y = y + x$ for addition order. Is this an equation or an identity?
7. A bank computes interest using $A = P(1 + \frac{r}{n})^{nt}$. Is this an equation or an identity?
8. A physicist writes $E = mc^2$. Is this an equation or an identity?
9. A student rewrites $x^2 - y^2 = (x + y)(x - y)$. Is this an equation or an identity?
10. A statistician defines mean as Mean = (Sum of values) ÷ (Number of values). Is this an equation or an identity?

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1. Equation
2. Identity
3. Identity
4. Equation
5. Identity
6. Equation
7. Identity
8. Identity
9. Identity
10. Equation

Scenario Questions

1. Equation
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